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ABSTRACT

The motivations of adult learners who were not admitted to college degree programs but who chose to take credit courses on a part-time basis were studied, with attention to the relationship of motivational orientations and sociodemographic variables (sex, race, age, and family income level). The study population of 464 part-time students 25 years and older were enrolled at North Carolina State University in fall 1985. Questionnaires completed by the students included 16 reasons for taking credit courses. These reasons were entered into a principal components factor analysis, and the factors were subjected to a varimax rotation. Multivariate analysis was also employed. From the 16 reasons for enrolling, four factors were extracted: job change, job enhancement, self-improvement, and social contact. For the job change scale, gender, age, and income were statistically significant. Higher mean scores on the job change scale were obtained by females than by males and by adults under age 40 than by those age 40 and over. Adults with incomes below $35,000 had higher mean job change scores than those with family incomes of $35,000 and over. Implications of the results for administrators of college programs for adults are addressed. (SW)

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EDUCATIONAL MOTIVATIONS OF PART-TIME ADULTS AS RELATED TO SOCIO-DEMOGRAPHIC VARIABLES

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EDUCATIONAL MOTIVATIONS OF PART-TIME ADULTS AS RELATED TO SOCIO-DEMOGRAPHIC VARIABLES

With the projected declines in the number of traditional students attending college, the part-time adult is becoming the target for recruitment efforts to maintain or even bolster college enrollments. Thus, for very pragmatic reasons administrators of institutions of higher education are increasingly interested in knowing the factors that influence adults to select formal educational programs. Therefore, studies of the educational motivations of the institution's adult student population are undertaken by administrators to develop effective recruitment and retention strategies aimed at the non-traditional, part-time adult learner.

The classical approach in the development of adult education programs is to assess the needs of the target population, to plan appropriate educational programs, and to utilize learning strategies that will satisfy these needs. Though Brookfield (1986) criticizes the concept of needs as too general, researchers have operationalized "needs" through the measurement of motivational orientations. Over twenty-five years ago Houle (1961) developed a typology of adult learners which has promoted a wealth of research on adult motivational orientation.

Based on the theoretical foundations established by Houle and the extensive research on motivational orientations, this study examines the motivations of adult learners who are not admitted to degree programs but who choose to take credit courses on a part-time basis. The relationship of socio-demographic variables to motivational orientations is explored to enhance university administrators' understanding of the adult part-time student.

Literature Review

From in-depth interviews of 22 adult learners, Houle (1961) concluded that there are three basic reasons for adults' continuing to learn. The three reasons are goal oriented, activity oriented, and learning oriented. The goal-oriented learner seeks to satisfy well-defined objectives through engaging in learning activities. On the other hand, the activity-oriented learners do not have specific learning objectives, but they participate in organized learning groups for social contact or for escape from boredom. In contrast to the other two types, the learning-oriented adult is intrinsically motivated to participate in educational experiences for the pleasure and satisfaction of increased knowledge.

Houle's typology has generated numerous studies of adult motivations. Though the instruments used to measure adult motivations have varied, studies have supported Houle's typology. However, most studies that use factor analysis or cluster analysis to explore the structure of adult motivations identify more than three underlying dimensions (Boshier, 1976; Boshier and Collins, 1985; Burgess, 1971; Morstain and Smart, 1977).

Boshier (1971) developed the 48-item Education Participation Scale to test Houle's theory and identified 14 first-order factors. Burgess (1971) identified seven reasons for participation, and Morstain and Smart (1977) found six clusters that explained adult motivational-orientations.

In a fairly definitive study of the structure of motivational orientation, Boshier and Collins (1985) cluster analyzed 13,422 observations drawn from 54 studies that had used the Education Participation Scale (EPS). The result was six clusters: cognitive interest, social stimulation, social contact, external expectations, community service, and professional advancement. Collapsing the six clusters into three clusters produced a pattern similar to Houle's typology. The cognitive interest cluster corresponds to the learning orientation,

and professional advancement matches Houle's goal orientation. The remaining four clusters---social stimulation, social contact, external expectations, and community service--are fairly congruent with the activity-oriented learner. However, these four clusters are distinct enough to warrant separate dimensions. Thus, Houle's activity-oriented type is too broad and needs to be redefined to include several categories of motivational orientations. Boshier and Collins (1985) recommend using the six factors derived from the revised EPS that contains 40 items.

Furst (1986) further reflects on the findings of Boshier and Collins (1985) and speculates that the multitude of reasons for adults participating in educational activities can be organized in a continuum from utilitarian to non-utilitarian. Whereas "cognitive interest" describes the adult who is intrinsically motivated and does not select courses for some pragmatic outcome, "professional advancement" depicts the extrinsically motivated adult learner who expects the course content to have practical significance.

Other studies have examined the functional relationship between motivational orientation and socio-demographic variables (Boshier, 1977; Johnstone and Rivera, 1965; Joseph, 1980; Mohrman, 1984; Morstain and Smart, 1974). In general, adults who participate in programs offered by institutions of higher learning are well-educated, employed, and motivated by job-related concerns (Anderson and Darkenwald, 1979; Cross and McCanten, 1984). Graham (1986) found that age was related to participation, with the 30 and above age group more likely to enroll in formal education than the younger adults. He also reports that among recent college graduates, income is related to participation: adults earning less money are more likely to participate. Based on an analysis of the NCES survey Participation in Adult Education 1981, Mohrman (1984) found that the college-educated adults were more likely to enroll in adult education for

job advancement, whereas adults without college degrees were likely to enroll to prepare for a job change. In general, more educated adults were more likely to cite job-related reasons than less educated students. Mohrman (1984) concludes that overall "the majority of adult students viewed their courses as an investment in their careers. They developed skills and knowledge to improve in their current jobs or to advance to new ones. . ." (p.11).

This study explores both the structure of a measure of adult learning motivation and the functional relationship of the resulting factor scores to socio-demographic variables.

Methods

A large-scale research project was undertaken by the Lifelong Education Division of North Carolina State University. Under the direction of the Self-Study Committee for Lifelong Education, a research agenda was developed to promote the understanding of the adult student population. This study addresses the problem of describing the motivations of the enrolled adult student.

The questionnaire was based on a review of the literature and input from the Self-Study Committee. The 16 items on reasons for continuing education are taken from Hemmingway's study (1981).

The response categories for the reasons for continuing their education were "strong influence," "moderate influence," "slight influence," and "no influence." The following socio-demographic data were collected on the survey: sex, race, age, and level of family income.

The population was all students 25 years and older enrolled during Fall 1985 in credit courses as part-time students. A stratified random sample was drawn. The strata included these four groups: adults in undergraduate degree programs; adults in graduate degree programs; adults who did not hold baccalaureate

degrees but had not been admitted to degree programs; and adults who held baccalaureate degrees but had not been admitted to degree programs. This study is limited to those adults who had not been admitted into degree programs. A total of 464 students from this group completed surveys, for a response rate of 43%.

The data were analyzed using SAS. The 16 reasons were entered into a principal components factor analysis. The factors were subjected to a varimax rotation since scale scores were used to test the relationship of socio-demographic variables to motivational factors. Scale scores were created by summing across the items that had a loading of .40 or greater on the factor. The relationship of socio-demographic factors (the independent variables) to the scale scores (the dependent variables) was examined through a multivariate analysis. If the overall model resulted in a statistically significant F-value ($p < .05$), then the Gabriel post hoc test (SAS, p. 474) was performed.

Results

The mean item scores and standard deviations are presented in Table 1. The four reasons with the highest means are goal-oriented: "to get a better paying job or promotion" ($\bar{X}=3.06$); "to work toward a degree" ($\bar{X}=3.05$); "to upgrade skills" ($\bar{X}=2.89$); and "to prepare for a career change" ($\bar{X}=2.84$).

The principal components factor analysis yielded four factors with eigenvalues greater than one. The four factors were subjected to a varimax rotation. Four items did not reach the criteria of .40 or higher loading on a single factor and were therefore omitted in the computation of scale scores. Following are the four items omitted: "to work toward a degree"; "to learn more things of interest"; "to learn a skill"; and "to be a better parent, husband, or wife."

The first factor contains items that refer to goals of general self-improvement. This factor accounts for 26.7% of the variance.

FACTOR 1
SELF IMPROVEMENT

ITEM	FACTOR LOADING
to become more cultured	.81
to gain a general education	.80
to improve my reading and study skills	.70
to be able to contribute more to society	.60
Eigenvalue = 3.20	
Proportion of variance accounted for = 26.7	
Coefficient alpha = .56	

The second factor contains items relating to enhancement of one's present job. These items are also goal oriented.

FACTOR 2
JOB ENHANCEMENT

ITEM	FACTOR LOADING
to improve performance in my present job	.88
to be able to earn more money in my present job	.81
to upgrade skills	.71
Eigenvalue = 2.12	
Proportion of variance accounted for = 17.7	
Coefficient alpha = .50	

Factor 3 is similar to Houle's (1961) activity orientation. The three items concern social interaction and relief from boredom.

FACTOR 3
SOCIAL CONTACT

ITEM	FACTOR LOADING
to meet interesting people	.73
to get away from the routine of daily life	.72
to improve my social life	.69
Eigenvalue = 1.35	
Proportion of variance accounted for = 11.3	
Coefficient alpha = .40	

Factor 4 contains items that are also goal oriented and relate to job or career changes. In part because only two items constitute this scale, the coefficient alpha is low (.28) and indicates that this scale needs further development for use in research.

FACTOR 4
JOB CHANGE

ITEM	FACTOR LOADING
to prepare for a career change	.86
to get a better paying job or promotion	.75
Eigenvalue = 1.01	
Proportion of variance accounted for = 8.4	
Coefficient alpha = .28	

The scale scores were created by summing across the items. A comparison of the mean item scores for each scale shows that "job change" is the most important dimension for this adult population ($\bar{X}$=2.95). "Job enhancement" is the second most important reason ($\bar{X}$=2.60), followed by "self-improvement" ($\bar{X}$=2.34) and "social contact" ($\bar{X}$=1.76). (See Table 2 for the means.)

Before the multivariate analysis was performed, the intercorrelation matrix of the four scales was examined. "Self improvement" and "social contact" are moderately correlated (r=.48); however, the other scales have low correlations, indicating independence. "Job change" and "job enhancement" have a correlation of only 0.16. (See Table 3.)

The four independent variables are gender, age level, educational level, and income. With "self-improvement" as the dependent variable, the model yields a significant F-value. However, these four variables account for only 10% of the variance. Educational level is the only statistically significant variable. The results of the post hoc analysis show that adults without college degrees have higher mean scores on "self-improvement" than college-degreed adults. (See Table 4.)

The analysis of the second scale indicates no relationship between the four socio-demographic variables and "job enhancement" scores.

For the "social contact" scale, the model is statistically significant, although it explains only 5% of the variance in scores. However, both income and educational levels reach statistical significance. (See Table 5.) Adults

with incomes under $20,000 have higher mean scores on "social contact" than adults with incomes over $34,999. Consistent with this finding, adults without college degrees have higher mean scores on "social contact" than college graduates.

The model with "job change" as the dependent variable has a significant F-value, with 9% of the variance explained by the socio-demographic variables. Income level, gender, and age are all statistically significant. Adults with incomes below $35,000 have higher mean scores on "job change" than those with family incomes of $35,000 and over. Adults under age 40 have higher mean scores on "job change" than adults 40 and over. Also females have higher mean scores on this scale than males. (See Table 6.)

In Table 7 are the comparisons of mean scale scores for the four socio-demographic variables. Significant differences are indicated by brackets, with the end points of the brackets pointing to the means that are statistically different.

Discussions and Conclusions

First the structure of adult motivation will be discussed, followed by a discussion of the relationship of socio-demographic variables to motivational orientation.

From the sixteen items were extracted four factors, three of which are goal oriented as described by Houle (1961). "Job change," "job enhancement," and "self-improvement" all refer to specific, concrete goals. The scales appear to indicate extrinsic motivation.

The one other factor "social contact" is very similar to Houle's (1961) activity orientation and Boshier's (1971) "social contact" factor.

Three goal-oriented items--to be a better parent or spouse, to learn a skill, to get a degree--did not load exclusively on any of the four factors.

However, "to work toward a degree" is the second most important reason for enrolling in college courses ($\overline{X}$=3.05). The most important reason is "to get a better paying job or promotion" ($\overline{X}$=3.06). Even though the adults in this sample are not enrolled in a formal degree program, they are attending for the purpose of applying the credit earned toward some future degree program.

The other item that did not load--"to learn more things of interest"-- is rather vague. The scale does not contain other items relating to cognitive interest (Boshier, 1971) or learning orientation (Houle, 1961).

Other factors that have been identified in the literature did not emerge primarily because the locally-developed instrument did not include the diversity of items contained in the EPS. The fact that the scale is not standard limits the generalizability of the results. On the other hand, the items reflect the concerns of the administration of the Lifelong Education Division at this institution. For local planning purposes, the scale does provide useful information. The fact that the part-time adult student is planning to obtain a degree suggests that academic advising is crucial. Adults need to know how many courses can transfer to a degree program, which courses apply toward the intended degree, and what procedures they must follow to apply.

Another significant finding for college administrators is the emergence of <u>two</u> job-related factors: learning to improve performance in one's present job versus learning to prepare for a new job or to change careers. Consistent with Mohrman's research (1984), job-related factors are more important than social contact or self-improvement. However, to treat job-related factors as a unitary dimension may be incorrect. At least with this sample, adults are more motivated by a career change than by enhancement of present job skills. Adults motivated by career or job changes may be exploring new fields before deciding what new career to pursue. Therefore, the courses they select may be unrelated

to their present job. In contrast, adults who enroll to improve performance in their present job are likely to take courses directly relevant to their jobs. This finding impacts the planning of credit courses for working adults. Administrators cannot assume that courses relevant to the jobs of adult students will satisfy all needs. Adults preparing for, or considering, a job or career change may need career counseling to assess their interests and aptitudes.

Some of the significant relationships between socio-demographics and motivations for learning are consistent with intuitive expectations. Younger adults are contemplating career changes more than established adults of 40 or older. Related to age is income level. Therefore, consistent with the previous finding, adults with high incomes of $35,000 and more are less likely to be planning a career change than adults with family incomes of less than $35,000. Attending college is perceived as a way of moving into higher-salaried jobs or careers for the younger, less well-established worker.

Contrary to sex-role stereotypes, females in this sample are more motivated by preparation for a job change than are males. Further analysis is needed to determine if the females are more likely to be in the lower income levels than are the men. Of relevance is the scientific and technological emphasis of the programs offered at this university. Women who hold jobs in the traditional fields of education, health, and clerical work may be moving into non-traditional jobs that offer more money and promotional opportunities.

Non-college graduates are motivated more by reasons of self-improvement and social contacts than are college graduates. Similarly the lower income adults are motivated more by the desire for social contact than upper-income adults. Overall, job-related motivations are stronger so that it is incorrect to conclude that lower income adults and non-college graduates are not motivated by job enhancement and job change. In fact, for both college graduates and

non-college graduates, for higher income and lower income groups, job change and job enhancement are more important motivators than social contact and self-improvement.

Lacking in the literature on adult learning motivation is research that examines the predictive validity of motivational orientations. Do adults with high job-related motivations subsequently enroll in degree programs and/or persist in their formal education more than adults with low job-related motivations? Which type of motivational orientation is most predictive of continued education and degree completion? Are motivational orientations predictive of course-taking patterns or grades earned in courses?

If recruitment of adult students to degree programs is the intent of institutions, then it is important to know which motivational orientations are most likely to lead to application to degree programs and degree completion. Concerns about attrition may be ill-founded if some adults pursue education sporadically, with no intention of continuous enrollment and degree completion. On the other hand, administrators should be concerned about drop-outs who have previously expressed high levels of motivation to complete degree requirements. Recruitment and retention efforts can be targeted to the appropriate population if more information is known about the relationship of adult motivational orientations to persistence and college success.

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TABLE 1
MEAN ITEM SCORES

ITEM	MEAN	STANDARD DEVIATION
To get a better paying job or promotion	3.06	1.13
To work toward a degree	3.05	1.20
To upgrade skills	2.89	1.14
To prepare for a career change	2.84	1.23
To lern more things of interest	2.78	1.02
To be able to contribute more to society	2.56	1.07
To gain a general education	2.47	1.18
To improve performance in my present job	2.46	1.26
To learn a skill	2.44	1.22
To be able to earn more money in my present job	2.44	1.24
To become more cultured	2.42	1.14
To meet interesting people	1.95	0.99
To improve my reading and study skills	1.93	1.06
To get away from the routine of daily life	1.88	1.00
To be a better parent, husband, or wife	1.75	1.06
To improve my social life	1.46	0.82
MEAN SCALE SCORES		
Self-improvement	9.36	3.37
Job enhancement	7.79	2.98
Social contact	5.28	2.11
Job change	5.89	1.97

TABLE 2
MEAN ITEM SCORES

SCALES	MEAN ITEM SCORE
Job Change	2.95
Job Enhancement	2.60
Self-Improvement	2.34
Social Contact	1.76

TABLE 3
INTERCORRELATION MATRIX OF MOTIVATIONAL SCALES

	SELF-IMPROVEMENT	JOB ENHANCEMENT	SOCIAL CONTACT	JOB CHANGE
Self-Improvement	1.00	0.18	0.48	0.10
Job Enhancement		1.00	0.05	0.16
Social Contact			1.00	0.12
Job Change				1.00

TABLE 4
REGRESSION ANALYSIS FOR SELF-IMPROVEMENT SCALE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F-VALUE
Model	6	478.3630	79.7272	7.83*
Error	423	4307.3487	10.1829	
Corrected Total	429	4785.7116		

VARIABLE	F-VALUE
Income Level	1.04
Sex	1.37
Age	2.13
Educational Level	39.26*

R-Square = .1000
Standard Error of the Estimate=3.2000

*Significant at the .0001 level.

TABLE 5
REGRESSION ANALYSIS OF SOCIAL CONTACT SCALE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F-VALUE
Model	6	86.9160	14.4860	3.43*
Error	423	1788.7026	4.2286	
Corrected Total	429	1875.6186		

VARIABLE	F-VALUE
Income Level	5.11*
Sex	1.09
AGe	0.28
Educational Level	8.69*

R-Square = 0.0463
Standard Error of the Estimate=2.0572

*Significant at the .01 level

TABLE 6
REGRESSION ANALYSIS OF JOB CHANGE SCALE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F-VALUE
Model	6	155.6120	25.9353	7.25*
Error	423	1513.3393	3.5776	
Corrected Total	429	1668.9512		

VARIABLE	F-VALUE
Income Level	8.98*
Sex	6.46**
Age	8.52*
Educational Level	2.04

R-Square = 0.0932
Standard Error of the Estimate=1.8786

*Significant at the .001 level
**Significant at the .05 level

TABLE 7
COMPARISON OF ADULT MOTIVATIONAL FACTORS
BY SOCIO-DEMOGRAPHIC VARIABLES

	SELF-IMPROVEMENT	JOB ENHANCEMENT	SOCIAL CONTACT	JOB CHANGE	(N)
GENDER					
Male	9.17	8.09	5.17	5.65	(207)
Female	9.54	7.52	5.38	6.10	(236)
AGE					
29 and Under	9.30	7.79	5.35	6.22	(165)
30-39	9.10	7.98	5.17	5.95	(188)
40 and Over	10.04	7.37	5.38	5.14	(90)
EDUCATIONAL LEVEL					
PBS	8.35	7.69	4.95	5.75	(226)
UGS	10.40	7.89	5.63	6.03	(218)
INCOME					
Below $20,000	9.44	7.34	5.77	6.14	(134)
$20,000-34,999	9.10	8.27	5.21	6.21	(136)
$35,000+	9.52	7.75	4.96	5.44	(173)

NOTE: Bracket endpoints connect statistically different means.